Laplace transform, which make it useful for obtaining solutions of physical problems; the former have been interested in embedding the formal properties in a mathematically satisfying logical structure. This book was written by a mathematician for other mathematicians, and contains no applications outside pure mathematics. However, it could serve as a useful source in which applied mathematicians might look for the properties which they need to use. The first chapter, which is the most convenient account of Stieltjes integrals yet to have appeared in a book, is also recommended to applied mathematicians. Stieltjes integrals, with their ability to handle both discrete and continuous cases at once, seem admirably suited for use in applied mathematics; however, up to the present time few applied mathematicians seem to have been aware of the potentialities of Stieltjes integrals. In this book the author uses Stieltjes integrals systematically, and is thus able to discuss both classical Laplace transforms and Dirichlet series as cases of the same general theory.

The book contains proofs of nearly all the auxiliary material which the author has used, and interesting applications of some of it to topics other than those strictly within the subject. Thus the theory of moment problems, introduced partly because a moment sequence is a discrete analogue of a Laplace transform and partly because some of the results are needed elsewhere in the book, is applied in a discussion of Hausdorff summability. Wiener's general Tauberian theorem (with Pitt's elegant proof) is applied not only to Tauberian theorems for Laplace transforms, but also to the prime number theorem (of which two proofs are given).

Other topics covered include regions of convergence of Laplace transforms; inversion formulas (both those involving contour integrals and those involving derivatives); necessary and sufficient conditions for the representation of functions as Laplace transforms; the iterated Laplace transform (or Stieltjes transform); absolutely and completely monotonic functions (no discussion of this last topic has previously been available in book form).

An experienced analyst will find in this book a large amount of useful material conveniently arranged and concisely expounded; a specialist will observe new theorems and new proofs of old theorems; a beginner will find important classical methods as well as problems at the frontiers of current research. The book contains ample refutation of the opinion, so frequently expressed nowadays, that "classical" analysis is a field in which interesting results are no longer to be expected.

R. P. BOAS, JR.

DUKE UNIVERSITY

## MEDICAL PSYCHOLOGY

*A History of Medical Psychology.* By GREGORY ZILBOORG, M.D., in collaboration with GEORGE W. HENRY, M.D. 606 pp. New York: W. W. Norton and Company, Inc. 1941. $5.00.

THOSE students who have felt the need of a historical orientation in the subject of mental disorders are now presented with the first comprehensive history of medical psychology in any language. Valuable material of this character exists in brief articles distributed through the medical and philosophical literature of the ages, in Jelliffe's translation of Friedreich's writings, in Kannabich's history of psychiatry in Russian (1928), in the contributions of Calmeil, Lelut, Trélat and of the two Semelaignes, and in the essays of D. Tuke and T. Kirchhoff, but heretofore there has been no perspective offered in a systematized way.

Here one finds a description and an evaluation of the evolution of the concepts of mental suffering, of emotional illnesses and of personality disorders, along with the story of the whole development of culture and the struggle against mental illness.

To the primitive man, mental deviations were mysterious. They are still far from being well understood, and streaks of demonology are found at present in the midst of our modern culture and in the offshoots of our contemporary thinking. The section "Primitive and Oriental Medical Psychologies" contains the statement that mental disorder "whether viewed with the clouded vision of a very primitive man, through the mystic eyes of Mosaic law, or through the pantheistic glasses of the Hindu, remained a mystery, reprehensible or admirable, which did not belong to medicine."

It is pointed out that the first serious attempt to place mental disease on a scientific foundation was made by the Greeks, and in the section on the Greeks and the Romans the activities of Hippocrates, Plato, Aristotle, Cicero, Celsus and Aretaeus are emphasized. Galen, who added so much to the general medical knowledge of the times, is characterized as having "contributed nothing new either to the therapy or to the clinical description of mental diseases." Then came the "Great Decline," a period toward the end of the twelfth century when medical psychology as such became attenuated as a healing art and was gradually isolated from scientific consideration, almost to the point of extinction.

The sections entitled "The Restless Surrender to Demonology" and "The Blows of the Witches' Hammers" are among the most informative, constituting fascinating accounts of the current ideas and prac-

tices, including the incredible and horrible cruelty associated with "witch" trials and executions of those suffering from now-recognizable mental twists. The reaction from this state of affairs appears in the text as "The First Psychiatric Revolution," stressing among others the pioneer labors of Vives (1492–1540), Paracelsus (1493–1541), Cornelius Agrippa (1486–1535), Johann Weyer (1515–1588) and Jean Bodin (1530–1596), all of whom took active parts in attempts to unravel many complexities and to demonstrate that mental disorders were natural diseases and not the handiwork of the devil.

From the "Age of Reconstruction" during which there were many important creative movements, one is led to the period called "The Discovery of the Neuroses," at which time psychiatry was vitalized by the work of Mesmer, Braid, Charcot, Janet and a number of their contemporaries who had gained glimpses of the laws of the mind in action. The "Era of Systems" is described next, at which time the special trend in the direction of differentiation and classification of mental diseases was forwarded by the outstanding investigations of Esquirol, Falret, Tuke and Kraepelin.

The climax in this history of medical psychology is found in the "Second Psychiatric Revolution," which describes the researches and ideas of Sigmund Freud, psychoanalytic and other psychodynamic concepts, and their expansion into the various divisions of modern work and thought. The contributions of Adolf Meyer, A. A. Brill, W. A. White and S. E. Jelliffe are included here.

The history of the concepts of some of the organic mental disorders, such as general paresis, senile conditions and alcoholic reaction types has been ably presented by Dr. Henry. He has also contributed a very useful section on the history of the influences governing the building and organization of mental disease hospitals from the earliest times to the present, which includes the story of the dire conditions and sad state of the early asylums as compared with modern accommodations and humane treatment.

The approach is humanistic and the style of writing is spontaneous and vivid. Although it would require a number of volumes to include all the desirable details of the history of medical psychology, the book will take an important place in the literature of the medical sciences, where it will serve those interested in human psychology, and it should stimulate a demand for further expansion.

NOLAN D. C. LEWIS
COLUMBIA UNIVERSITY

# SOCIETIES AND MEETINGS

## THE SOUTHERN ASSOCIATION OF SCIENCE AND INDUSTRY

THE Georgia Academy of Science served as host at the second annual meeting of the Southern Association for the Advancement of Science at the Biltmore Hotel in Atlanta, on April 2 and 3. At this meeting it was agreed that the name of the organization be changed to The Southern Association of Science and Industry, in order that the participation of industrialists and business men in the organization might be more properly indicated.

With Dean Wortley F. Rudd, Medical College of Virginia, presiding, addresses were given before the association by Dr. W. B. Baker, Emory University, president of the Georgia Academy of Science, and Governor Eugene Talmadge, of Georgia. Dr. George H. Boyd, University of Georgia, president-elect of the association, spoke on "Some Basic Considerations in Building for Research in Southern Problems."

Panel discussions, open forums, etc., were conducted on important regional problems, and many southern and national leaders participated. Chairmen and topics of the various discussion groups included Dean C. F. Korstian, School of Forestry, Duke University, "Conservation of One of the South's Major Crops—Its Forests"; Dean Stewart J. Lloyd, University of Alabama, "The Teaching of Science in the Secondary Schools of the South"; Dr. Milton H. Fies, De-Bardeleben Coal Corporation, Birmingham, Alabama, "As Others See Us"; and Dr. J. Sam Guy, Emory University, "Role of Scientific Research in the Development of Natural Resources of the South." Dean Rudd delivered the presidential address, entitled "Remarks," at the banquet, on Thursday, April 2, at 8:00 P.M.

Certain business matters, such as the constitution, reports of standing and special committees, were considered and agreed upon. It was further agreed that the incoming president should appoint a "Long Range Planning Committee" and a committee to make a survey of all research now being carried on in the South. The president was requested to appoint a committee to consider the possibility of increasing a service such as is now being rendered by Dr. E. Emmet Reid through visitation and technical advice to the various research groups in the South.

The original territory was changed to include all of Texas, and, upon insistence by representative residents, it was agreed that Maryland and the District of Columbia be added for membership in the Southern Association of Science and Industry. Several state academies and other state and regional science or-